

REMARKS

By this amendment, claim 7 and title are revised and claims 8-17 are canceled to place this application in condition for allowance. Currently, claims 1-7 are before the Examiner for consideration on their merits.

In the Action, the Examiner raises an objection with the form of claim 7. In response to this objection, claim 7 is revised to make it clear that flow rates of the gas are changeable in one of two ways. In light of this revision, the objection should be withdrawn.

The Examiner also rejects claim 1 under 35 U.S.C. § 112, second paragraph on the grounds that the language is unclear. Applicants wish to traverse this rejection on the grounds that claim 1, on its face, is not indefinite and does not require any change. First, indefiniteness is always measured in terms of the skill in the art and the written specification. When considering these sources, a fair reading of claim 1 does not lead to the conclusion of indefiniteness drawn in the rejection. Therein, the Examiner takes the position that "it is unclear in what manner the applicant intends for the plural groups to be thus controlled (e.g. motion, temperature, etc.)" Applicants submit that claim 1 on its face is clear by the fact that a "manner" of control is stated, i.e., gas flow rate. Flow rate such as cubic feet per second would be a control parameter so it is not understood why claim 1 is considered to be indefinite. If the Examiner persists in this line of rejection, the Examiner is invited to telephone the undersigned if this is the only issue barring allowance

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of this application.

Turning now to the prior art rejection, it is submitted that the Examiner has not established a *prima facie* case of anticipation against the rejected claims. In review, claims 1, 2, 3, 6, and 7 are rejected under 35 U.S.C. § 102(b) based on United States Patent No. 6,386,001 to Shimizu et al. (Shimizu). Claims 4 and 5 are considered obvious under 35 U.S.C. § 103(a) based on the combination of Shimizu and United States Patent No. 5,554,022 to Nabors.

Applicants respectfully traverse the rejection under the headings of the INVENTION and the ARGUMENTS.

### INVENTION

One prominent feature of the invention is the specific structure of the burner system set forth in the method of claim 1. That is, the method provides a burner that is able to create flame-controlled conditions by controlling the flow rates of flammable gas and a supporting gas. To accomplish this aim, the burner is further provided with an arrangement wherein the supporting gas is discharged from at least one group of discharge pipes co-axially classified into plural groups. These plural groups are respectively controllable with respect to the gas flow rate. As a result of this unique arrangement, the preform can be processed under the flame-controlled conditions as desired.

The Examiner's attention is directed to Figures 3A and 4A of the drawings. Figure

3A shows an arrangement of three groups of discharge pipes. A first group of pipes is associated with the outer most section S1, a second group of pipes is associated with the innermost section S3, and a group S2 is identified in between the innermost and outermost group Sections S1 and S3. As importantly and with reference to Figure 4A, each of the groups S1, S2, and S3 are controlled with respect to a gas flow rate. This control of each group is set forth in claim 1 by the language " .... into plural groups that are, respectively, controllable with respect to a gas flow rate.... ." As described in the specification, this allows for changing the flame form and intensity via the control of each group.

#### ARGUMENTS

In alleging anticipation, the Examiner contends that Shimizu teaches the claimed method and references Figures 44 and 45 to support the allegation of anticipation. With particular respect to the plural groups, the Examiner contends that the concentric distribution of pipes in Figure 45 can be considered to be plural groups.

Addressing the control of the groups, the Examiner appears to contend that since the flammable gas or hydrogen and the supporting gas or oxygen are together controlled, this constitutes respective control of the gas rate of the plural groups.

On the other hand, the Examiner also makes the statement that since the gas flow from all of the supporting gas discharge pipes is controlled by the unit 310, the supporting gas passing through the "groups" of supporting gas discharge pipes means that there is

control in every group.

It is submitted that either of the interpretations above are insufficient to establish a *prima facie* case of anticipation against claim 1.

The first position that Shimizu teaches controls of each of the hydrogen and oxygen supply does not teach respective control of groups of pipes discharging the supporting gas. The control of the hydrogen gas is already recited in lines 3 and 4 of claim 1. The issue for resolution here is the presence of supporting gas pipe groups and the control of the gas flow rate of these pipe groups.

Turning now to the second position, Applicants submit that Shimizu does not teach respective control of plural groups of the supporting gas. Even *assuming, arguendo*, that Shimizu can be considered to have plural groups of supporting gas discharge pipes, it is unclear as to the basis for the contention that there is respective control of the gas flow rate for the plural groups. In the rejection, the Examiner appears to say that since the overall gas is controlled, every group is controlled. While it could be said that every pipe or every group of pipes is controlled, there is still only one control. Claim 1 requires that the gas flow rate for each group is respectively controlled, and this is just not the same control as taught in Shimizu. Shimizu employs one control for all of the discharge pipes; there is no respective control of plural groups of pipe.

Applicants' contention that a single control of the supporting gas is all that Shimizu teaches is buttressed by Shimizu's inert gas circuit that supplies nitrogen to the system. As Figure 44 shows, there is only one on/off valve for the nitrogen supply. Col. 32, lines

19-41, describes the use of inert gas to control the flame. If there is a single supply of nitrogen is introduced into the oxygen supply, how can it be alleged that there is respective control of plural groups of supporting gas pipes? In fact, Shimizu teaches just one supporting gas control, and this reference cannot anticipate claim 1 for this reason.

The secondary reference to Nabors does not supply the deficiency in Shimizu. The burner apparatus of Nabors has oxidizer pipes that are not divided into groups in a manner as taught in the present invention. Instead, it includes first and second ports in a manner completely different from the coaxially classified pipes set out in claim 1. While Nabors may be relied upon to say that it would be known that oxidizers may be discharged from two or five ports therefore, the claim limitation at issue regarding control of the plural groups is not found in Nabors. Therefore, even if Nabors were combined with Shimizu, a *prima facie* case of obviousness against claim 1 is not established.

In light of the above, it is demonstrated that Shimizu cannot anticipate claim 1 and Shimizu and Nabors do not render the claim obvious. Therefore, the Examiner is faced with the option of either allowing claim 1 or making another assertion of obviousness based on Shimizu or some other reason or prior art, e.g., it is obvious to use multiple controls instead of a single control in Shimizu.

It is respectfully submitted that there is no basis to make any further allegation of obvious based on Shimizu. While the Examiner has interpreted the pipes of Shimizu to be in groups, there is no express recognition of the need to group the supporting pipes into plural groups for any particular reason. The Examiner's contention that Shimizu teaches

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plural groups of supporting gas pipes is done in a vacuum or in light of the invention; there is nothing in Shimizu that would prompt such a grouping. Therefore, just interpreting Shimizu to have groups of supporting gas discharge pipes cannot serve as grounds for rejecting claim 1 under 35 U.S.C. § 103(a).

Since Shimizu lacks any recognition of dividing the supporting gas pipes into groups for any purpose, the Examiner has no legitimate grounds to say that one of skill in the art would be motivated to provide multiple groups of pipes with multiple controls 310 in the apparatus of Shimizu. This would be the blatant use of hindsight. Therefore, there are no other legitimate grounds to support a rejection of claim 1 under 35 U.S.C. § 103(a). Since claim 1 is demonstrated to be patentable over the applied prior art, its dependent claims 2-7 are also in condition for allowance.

Accordingly, the Examiner is respectfully requested to examine this application in light of the arguments made above, and pass claims 1-7 onto issuance.

If the Examiner believes that an interview would be helpful in expediting the allowance of this application, the Examiner is requested to telephone the undersigned at 202-835-1753.

The above constitutes a complete response to all issues raised in the Office Action dated September 19, 2006.

Again, reconsideration and allowance of this application is respectfully requested.

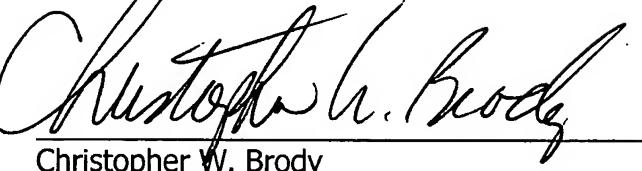
Applicants petition for a three month extension of time. A check in the amount of \$1,020.00 is enclosed.

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Please charge any fee deficiency to Deposit Account No. 50-1088.

Respectfully submitted,

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